

BJU(CBRT)

PROVISIONAL ANSWER KEY

Name of the post Pathologist, Class-1, Employees State Insurance Scheme

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THE LINK FOR ONLINE OBJECTION SYSTEM WILL START FROM 21-12-2024; 04:00 PM ONWARDS

Instructions / સૂચન

Candidate must ensure compliance to the instructions mentioned below, else objections shall not be considered: -

- (1) All the suggestion should be submitted through **ONLINE OBJECTION SUBMISSION SYSTEM** only. Physical or submission through E- Mail of suggestions will not be considered.
- (2) Question wise suggestion to be submitted in the prescribed format (proforma) published on the website / online objection submission system.
- (3) All suggestions are to be submitted with reference to the Master Question Paper with provisional answer key (Master Question Paper), published herewith on the website / online objection submission system. Objections should be sent referring to the Question, Question No. & options of the Master Question Paper.
- (4) Suggestions regarding question nos. and options other than provisional answer key (Master Question Paper) shall not be considered.
- (5) Objections and answers suggested by the candidate should be in compliance with the responses given by him in his answer sheet. Objections shall not be considered, in case, if responses given in the answer sheet /response sheet and submitted suggestions are differed.
- (6) Objection for each question should be made on separate sheet. Objection for more than one question in single sheet shall not be considered.

ઉમેદવારે નીચેની સૂચનાઓનું પાલન કરવાની તકેદારી રાખવી, અન્યથા વાંધા-સૂચન અંગે કરેલ રજૂઆતો ધ્યાને લેવાશે નહીં

- (1) ઉમેદવારે વાંધા-સૂચનો ફક્ત **ઓનલાઇન ઓબ્જેક્શન સબમીશન સીસ્ટમ** દ્વારા જ સબમીટ કરવાના રહેશે. રૂબરૂ, ટપાલ અથવા ઈ-મેઇલ દ્વારા આયોગની કચેરીએ મોકલવામાં આવેલ વાંધા-સૂચનો ધ્યાને લેવામાં આવશે નહીં જેની ખાસ નોંધ લેવી.
- (2) ઉમેદવારે વાંધા-સૂચનો રજૂ કરવા વેબસાઇટ / ઓનલાઇન ઓબ્જેક્શન સબમીશન સીસ્ટમ પર પ્રસિધ્ધ થયેલ નિયત નમૂનાનો જ ઉપયોગ કરવો.
- (3) ઉમેદવારે પોતાને પરીક્ષામાં મળેલ પ્રશ્નપુસ્તિકામાં છપાયેલ પ્રશ્નક્રમાંક મુજબ વાંધા-સૂચનો રજૂ ન કરતા તમામ વાંધા-સૂચનો વેબસાઇટ પર પ્રસિધ્ધ થયેલ પ્રોવિઝનલ આન્સર કી (માસ્ટર પ્રશ્નપત્ર) ના પ્રશ્નક્રમાંક મુજબ અને તે સંદર્ભમાં રજૂ કરવા.
- (4) માસ્ટર પ્રશ્નપત્રમાં નિર્દિષ્ટ પ્રશ્ન અને વિકલ્પ સિવાયના વાંધા-સૂચનો ધ્યાને લેવામાં આવશે નહીં.
- (5) ઉમેદવારે પ્રશ્નના વિકલ્પ પર વાંધો રજૂ કરેલ છે અને વિકલ્પ રૂપે જે જવાબ સૂચવેલ છે એ જવાબ ઉમેદવારે પોતાની ઉત્તરવહીમાં આપેલ હોવો જોઈએ. ઉમેદવારે સૂચવેલ જવાબ અને ઉત્તરવહીનો જવાબ ભિન્ન હશે તો ઉમેદવારે રજૂ કરેલ વાંધા-સૂચનો ધ્યાને લેવાશે નહીં.
- (6) એક પ્રશ્ન માટે એક જ વાંધા-સૂચન પત્રક વાપરવું. એક જ વાંધા-સૂચનો પત્રકમાં એકથી વધારે પ્રશ્નોની રજૂઆત કરેલ હશે તો તે અંગેના વાંધા-સૂચનો ધ્યાને લેવાશે નહીં.

Website link for online objection submission system : <http://gpsc.safevaults.in/login/>

001. Which of the following is not correct about H antigen:
(A) Present in all ABO group individuals
(B) If not present, H antibody will be present in plasma
(C) Besides blood cells, present in tissue as well
(D) H antigen is present in Bombay blood group individuals
002. Tumour suppressor genes are also called as:
(A) Antioncogenes (B) Oncogenes
(C) Proto oncogenes (D) Proximate carcinogens
003. In a quality control context, what does a “Levey-Jennings chart” monitor?
(A) Daily temperature readings (B) Trends and shifts in control sample results
(C) Reagent expiration dates (D) Instrument calibration status
004. For Direct Antiglobulin Test cell suspension is prepared as
(A) 2-4% (B) 0.5 to 1%
(C) 10 to 20% (D) None of the above
005. What is the primary purpose of a stool examination?
(A) To diagnose urinary tract infections
(B) To identify pathogens causing gastrointestinal infections
(C) To detect blood in the stool
(D) To measure stool consistency
006. In quality control, what does the term “mean” refer to?
(A) The average value of a set of measurements
(B) The most frequently occurring value in a set of measurements
(C) The middle value in a set of measurements
(D) The highest value in a set of measurements
007. What is the primary role of a laboratory information management system (LIMS) in quality control?
(A) Storing patient test results (B) Scheduling laboratory personnel
(C) Managing reagent inventory (D) Tracking and analyzing quality control data
008. Which method is most appropriate for assessing the linearity of a biochemistry assay over its entire analytical range?
(A) Bland-Altman plot (B) Levey-Jennings chart
(C) Linear regression analysis (D) ROC curve analysis
009. Which of the following factors is least likely to cause a false positive in a biochemistry quality control test?
(A) Sample contamination (B) Analytical specificity
(C) Cross-reactivity of reagents (D) Improper calibration
010. The most common cause of beta thalassemia is
(A) Point mutation (B) Insertion
(C) Deletion (D) All are equally distributed.
011. Which of the following abnormality describes characteristics cytological feature caused by HPV infection?
(A) Acanthosis (B) Parakeratosis
(C) Hyperkeratosis (D) Koilocytosis

012. What is the main advantage of using hot-start PCR?
 (A) Increased specificity (B) Faster amplification
 (C) Reduced cost (D) Higher yield of DNA
013. Which of the following is a key component of the PCR reaction that provides the necessary heat stability?
 (A) Taq polymerase (B) DNA ligase
 (C) RNA polymerase (D) Reverse transcriptase
014. What is the purpose of using a sterile environment when handling bacterial cultures?
 (A) To prevent contamination of the culture (B) To prevent the growth of bacteria
 (C) To detect the presence of bacteria (D) To identify the type of bacteria present
015. In Western blotting, what is the purpose of the SDS-PAGE step?
 (A) To separate proteins based on size (B) To transfer proteins to the membrane
 (C) To hybridize with the probe (D) To visualize the DNA
016. In acute pancreatitis which of following type of necrosis occurs
 (A) Liquifaction (B) Fat
 (C) Coagulation (D) Fibrinoid
017. Asthma is example of
 (A) Type I Hypersensitivity (B) Type II Hypersensitivity
 (C) Type III Hypersensitivity (D) Type IV Hypersensitivity
018. Which of the following is used to assess the acid-base balance in the body?
 (A) Serum creatinine (B) Blood urea nitrogen (BUN)
 (C) Serum bicarbonate (D) Urine osmolality
019. What is the main advantage of using chemiluminescent detection in Western blotting?
 (A) Higher sensitivity (B) Faster processing time
 (C) Lower cost (D) Easier quantification
020. What is the name of the acid-fast dye used in AFB staining?
 (A) Carbol fuchsin (B) Auramine-O
 (C) Malachite green (D) Methylene blue
021. Which test is used to assess the synthetic function of the liver?
 (A) Serum bilirubin (B) Serum albumin
 (C) Alkaline phosphatase (ALP) (D) Aspartate aminotransferase (AST)
022. Which test is used to measure the concentrating ability of the kidneys?
 (A) Serum creatinine (B) Specific Gravity
 (C) Blood urea nitrogen (BUN) (D) Serum electrolytes
023. Colour of antiserum D is:
 (A) Blue (B) Yellow
 (C) Red (D) Colorless
024. Stains for lipid are all except
 (A) Oil red O (B) Sudan IV
 (C) Sudan Black B (D) Von Kossa

025. Which of the following is a marker for cholestasis?
 (A) Serum albumin (B) Bilirubin
 (C) Alkaline phosphatase (ALP) (D) Prothrombin time (PT)
026. What is the name of the test used to detect the presence of occult blood in the stool?
 (A) Guaiac test (B) Fecal occult blood test (FOBT)
 (C) Hemocult test (D) Hemoglobin test
027. In acute pancreatitis, the enzyme raised in first five days is
 (A) Serum amylase (B) Serum lactic dehydrogenase
 (C) Urinary lipase (D) Urinary amylase
028. Pilomatrixoma shows
 (A) Handerson Paterson bodies (B) Ghost cells
 (C) Asteroid bodies (D) None
029. Water deprivation test is used in the diagnosis of
 (A) Anterior pituitary disease. (B) Posterior pituitary disease
 (C) Hypothyroidism (D) Diabetes Mellitus
030. Fabry's disease is due to the deficiency of the enzyme:
 (A) Ceramide trihexosidase (B) Galactocerebrosidase
 (C) Phytanic acid oxidase (D) Sphingomyelinase
031. Which of the following is the recommended method for collecting sputum samples for AFB staining?
 (A) Induced sputum (B) Spontaneous sputum
 (C) Gastric aspirate (D) Bronchoalveolar lavage
032. Most blood group systems are inherited as:
 (A) Autosomal Co-dominant (B) Sex linked dominant
 (C) Autosomal recessive (D) Sex linked recessive
033. Hemolytic anemia is caused by the deficiency of certain enzymes of the pentose phosphate pathway, the principal enzyme involved is
 (A) Glucose-6-phosphate dehydrogenase (B) Aldolase
 (C) Fructose 1, 6-bisphosphatase (D) Phosphohexose isomerise
034. Which one of the following is not associated with red cell aplasia?
 (A) High reticulocyte count (B) Parvovirus infection
 (C) Thymoma (D) CLL
035. Which of the following is a common cause of isolated elevated alkaline phosphatase (ALP)?
 (A) Viral hepatitis (B) Bone disease
 (C) Cirrhosis (D) Hemolytic anemia
036. What is the purpose of incubating bacterial cultures at different temperatures?
 (A) To promote the growth of bacteria (B) To inhibit the growth of bacteria
 (C) To detect the presence of bacteria (D) To identify the type of bacteria present
037. Calcium is required for the activation of the enzyme:
 (A) Isocitrate dehydrogenase (B) Fumarase
 (C) Succinate thiokinase (D) ATPase

038. Tuberculosis lymph node shows which type of necrosis
 (A) Coagulative (B) Liquifactive
 (C) Caseous (D) Gangrenous
039. Blood chemistry shows the following changes in compensated respiratory acidosis:
 (A) Increased pCO₂ (B) Increased bicarbonate
 (C) Decreased chloride (D) All of these
040. Popcorn cell appearance is seen in:
 (A) Nodular lymphocyte - predominant Hodgkin lymphoma
 (B) Nodular sclerosing Hodgkin lymphoma
 (C) Lymphocyte-rich Hodgkin lymphoma
 (D) Lymphocyte-depleted Hodgkin lymphoma
041. Which of the following is a common type of bacterial culture medium used to detect the presence of bacteria?
 (A) Blood agar (B) MacConkey agar
 (C) Mannitol salt agar (D) All of above
042. In Western blotting, what is the purpose of the SDS-PAGE step?
 (A) To separate proteins based on size (B) To transfer proteins to the membrane
 (C) To hybridize with the probe (D) To visualize the DNA
043. An example of metalloprotein is
 (A) Casein (B) Ceruloplasmin
 (C) Gelatin (D) Salmine
044. The following is not a feature of Fanconi anemia
 (A) Short stature (B) Hypopigmented spots
 (C) Macrocephaly (D) Hypogonadism
045. Causes of pancytopenia includes all except
 (A) Megaloblastic anemia (B) Hypersplenism
 (C) SLE (D) CML
046. The technique for purification of proteins that can be made specific for a given protein is
 (A) Gel filtration chromatography (B) Ion exchange chromatography
 (C) Electrophoresis (D) Affinity chromatography
047. What is the purpose of the ova and parasite (O&P) examination?
 (A) To detect bacterial pathogens (B) To detect viral pathogens
 (C) To detect parasitic pathogens (D) To detect fungal pathogens
048. Hpersensitivity mediated by Ig E
 (A) Type I (B) Type II
 (C) Type III (D) Type IV
049. Bile duct obstruction can be diagnosed by:
 (A) AST (B) T. Bilirubin
 (C) Bilirubin in urine (D) Ester Bilirubin
050. Tumor marker for prostate cancer is
 (A) CA-125 (B) Alpha fetoprotein
 (C) Calcitonin (D) Acid phosphatase

051. What is the purpose of using blood agar as a bacterial culture medium?
 (A) To detect the presence of bacteria
 (B) To identify the type of bacteria present
 (C) To determine the antibiotic susceptibility of bacteria
 (D) To promote the growth of bacteria
052. Which of the following is a common method for visualizing PCR products?
 (A) Gel electrophoresis (B) Mass spectrometry
 (C) Western blotting (D) Flow cytometry
053. In indirect Coomb's test sensitivity can be increased by:
 (A) Enzymes (B) Albumin
 (C) LISS (D) All of the above
054. Which of the following is not a feature of benign tumours
 (A) Slow growth (B) Well demarcated
 (C) Secrete hormones (D) Infiltrate adjacent tissue
055. What is the primary purpose of PCR?
 (A) To amplify DNA sequences (B) To sequence DNA
 (C) To synthesize DNA (D) To analyze DNA
056. Physaliferous cells seen in
 (A) Chordoma (B) Chondroblastoma
 (C) Fibrous dysplasia (D) Chondrosarcoma
057. A glomerulus like structure composed of central blood vessel enveloped by germ cells within a space lined by germ cells is seen in
 (A) Seminoma (B) Embryonal ca
 (C) Lymphoma (D) Yolk sac tumor
058. Which of the following is a critical step in Western blotting?
 (A) Electrophoresis (B) Transfer of proteins to a membrane
 (C) Blocking of non-specific binding sites (D) All of the above
059. Wet keratin, stellate reticulum, palisading nuclei are feature of
 (A) Oligodendroglioma (B) Glioblastoma
 (C) Pilocytic astrocytoma (D) Craniopharyngioma
060. The earliest neurological sign of megaloblastic anemia is
 (A) Loss of position sense (B) Loss of vibration sense
 (C) Dysdiadochokinesia (D) Romberg sign positive
061. Which of the following is a common type of membrane used in Northern blotting?
 (A) Nitrocellulose (B) Polyvinylidene fluoride (PVDF)
 (C) Nylon (D) All of the above
062. Both parents are group AB, which of the following are possible offspring ?
 (A) AB (B) B
 (C) A (D) All of the above
063. Call Exner bodies are seen in
 (A) Granulosa cell tumor (B) Glioblastoma
 (C) Retinoblastoma (D) Yolk sac tumor

064. Which of the following is a common type of bacterial culture medium used to detect the presence of fungi?
 (A) Sabouraud dextrose agar (B) Blood agar
 (C) MacConkey agar (D) Mannitol salt agar
065. Which one of the following features is not used in modified Bloom Richardson grading system of breast cancer?
 (A) Tubule formation (B) Nuclear pleomorphism
 (C) Mitosis (D) Tumour necrosis
066. Indian file pattern is seen in
 (A) Invasive duct ca (B) Invasive lobular ca
 (C) Fibroadenoma (D) Medullary carcinoma
067. What is the purpose of using a probe in Southern blotting?
 (A) To detect the presence of specific DNA sequences
 (B) To separate the DNA fragments by size
 (C) To transfer the DNA fragments to a membrane
 (D) To cut the DNA into smaller fragments
068. In CML t(9; 22) results from translocation of:
 (A) Long arm of chromosome 9 to short arm of chromosome 22
 (B) Long arm of chromosome 9 to long arm of chromosome 22
 (C) Short arm of chromosome 9 to short arm of chromosome 22
 (D) Short arm of chromosome 9 to long arm of chromosome 22
069. Bethesda system of reporting is used for
 (A) Thyroid reporting (B) PAP smear reporting
 (C) Breast cytology reporting (D) Both (A) and (B)
070. ELISA detects Ag-Ab reaction by
 (A) Change in colour (B) Emission of light
 (C) Fluorometric method (D) Clumping of particles
071. Majority of transfusion reaction are of type:
 (A) Autoimmune Hemolytic Transfusion Reaction
 (B) Febrile nonhemolytic transfusion reaction
 (C) Graft versus host disease
 (D) Circulatory overload
072. About GTT, which is NOT correct according to WHO recommendations?
 (A) Should not be done in pregnant women
 (B) Should not be done after giving heavy carbohydrate diet for 3 days
 (C) Should be done after 6-8 hrs fasting
 (D) 100g Glucose is used
073. What is the purpose of using chocolate agar as a bacterial culture medium?
 (A) To detect the presence of bacteria
 (B) To identify the type of bacteria present
 (C) To determine the antibiotic susceptibility of bacteria
 (D) To promote the growth of Haemophilus influenzae

074. Migration of leukocytes through intact endothelium is called
 (A) Rolling (B) Migration
 (C) Chemotaxis (D) Diapedesis
075. Bleeding in DIC is due to:
 (A) Raised thrombin time (B) Low fibrinogen levels
 (C) Raised FDP levels in blood (D) Prolonged PT
076. Which of the following is a common cause of food poisoning?
 (A) Staphylococcus aureus (B) Salmonella Enteritidis
 (C) Escherichia coli (D) Campylobacter jejuni
077. 40-year-old male patient presented with painful forearm swelling. Histopathological investigation shows nuclear palisading. On IHC cells are positive for S100. Most likely diagnosis?
 (A) Neurofibroma (B) Schwannoma
 (C) cartilaginous tumour (D) Melanoma
078. 70-year male presented with colonic adenocarcinoma. What is expected CK7/CK20 profile of patient?
 (A) CK 7+ CK20+ (B) CK 7 – CK 20 –
 (C) CK 7+ CK 20 - (D) CK7- CK
079. What is the ideal time for collecting sputum samples for AFB staining?
 (A) Early morning (B) Late evening
 (C) After meals (D) Any time of the day20+
080. Carcinoid tumors secrete
 (A) 5HIAA (B) Adrenaline
 (C) Insulin (D) Serotonin
081. What is the first step in the PCR process?
 (A) Denaturation (B) Annealing
 (C) Extension (D) Amplification
082. POEMS syndrome is characterized by, *all except*:
 (A) Neuropathy (B) Osteolytic lesions
 (C) Endocrinopathy (D) Myopathy
083. What is the purpose of using a probe in Northern blotting?
 (A) To detect the presence of specific RNA molecules
 (B) To separate the RNA molecules by size
 (C) To transfer the RNA molecules to a membrane
 (D) To denature the RNA
084. Giant cell tumour of bone most commonly affects...
 (A) Metaphysis (B) Epiphysis
 (C) Diaphysis (D) All of the above
085. Patients who receive multiple transfusions develop:
 (A) Hemosiderosis (B) Hemolytic reactions
 (C) Non- hemolytic reactions (D) Anaphylactic transfusion reaction

086. What is the primary purpose of Western blotting?
(A) To detect the presence of DNA in a sample
(B) To detect the presence of RNA in a sample
(C) To detect the presence of proteins in a sample
(D) To detect the presence of antibodies in a sample
087. What is composition of membrane attack complex
(A) C5b to C9 (B) c5a
(C) c3bbb (D) c4b2a
088. Mutation t(11:22) EWS-FLI 1 gene seen in
(A) Ewings sarcoma (B) Chondroblastoma
(C) Fibrous dysplasia (D) Chondrosarcoma
089. Which of the following is a common detection method used in Northern blotting?
(A) Chemiluminescence (B) Fluorescence
(C) Radioisotopic detection (D) All of the above
090. Coomb's test is otherwise known as
(A) Compatibility test (B) Anti-Human globulin test
(C) Tissue typing test (D) Donor confidence test
091. Cell cycle phases
(A) G0-S-G1-G2-M (B) G0-G1-S-G2-M
(C) G1-G0-S-G2-M (D) S-G0-G1-G2-M
092. Which of the following is a critical step in preparing the sputum sample for AFB staining?
(A) Homogenization (B) Centrifugation
(C) Filtration (D) All of the above
093. Fried egg appearance seen in
(A) Oligodendroglioma (B) Glioblastoma
(C) Pilocytic astrocytoma (D) Meningioma
094. What is the purpose of performing a Gram stain on a bacterial culture?
(A) To detect the presence of bacteria
(B) To identify the type of bacteria present
(C) To determine the antibiotic susceptibility of bacteria
(D) To promote the growth of bacteria
095. Each unit of whole blood increases the Hb level by
(A) 0.5 g% (B) 1 g%
(C) 2 g% (D) None of the above
096. Stain used to detect glycogen
(A) Oil Red O (B) Pearls stain
(C) PAS (D) Congo Red
097. Which of the following bacteria can cause pseudomembranous colitis?
(A) Clostridioides difficile (B) Escherichia coli
(C) Salmonella Typhi (D) Shigella dysenteriae

098. In which of the following conditions iron absorption will be increased:
(A) Pregnancy (B) Chronic inflammation
(C) Iron overload (D) Phosphates
099. An example of tumor suppressor gene
(A) p53 (B) C Myc
(C) RAS (D) Bcr
100. *Plasmodium vivax* infects which of the following?
(A) Mature RBC (B) Young red cells
(C) RBC of all ages (D) None of the above
101. Cryoprecipitate must be transfused within what period of time following thawing and pooling.
(A) 4 hours (B) 8 hours
(C) 12 hours (D) 16 hours
102. Which of the following best describes a systematic error in laboratory testing?
(A) Variations that occur randomly and unpredictably
(B) Consistent deviations from the true value
(C) Errors due to faulty reagents
(D) Errors that occur due to environmental changes
103. To qualify donor for autologous transfusion patient hemoglobin should be at least
(A) 8 g/dl (B) 11 g/dl
(C) 13 g/dl (D) 14 g/dl
104. Which of the following quality control materials would provide the best assessment of accuracy and precision in a high-complexity clinical chemistry test?
(A) Commercially available control samples with known concentrations
(B) Patient samples with unknown concentrations
(C) Water blanks
(D) In-house prepared control materials
105. Which of the following modifications of PCR is used to amplify RNA sequences?
(A) Real-time PCR (B) Reverse transcription PCR (RT-PCR)
(C) Multiplex PCR (D) Nested PCR
106. What is the purpose of using a positive control in Southern blotting?
(A) To detect the presence of specific DNA sequences
(B) To verify the specificity of the probe
(C) To enhance the sensitivity of the assay
(D) To detect the presence of antibodies in a sample
107. What does QA and QC stand for
(A) Quality assurance and Queuing control (B) Quality adjustment and Quality completion
(C) Quality assurance and quality control (D) Quality adjustment and Queuing control
108. When evaluating quality control data, what does a "shift" indicate?
(A) Random errors occurring sporadically
(B) A sudden change in the mean value of control measurements
(C) Gradual changes in control measurements over time
(D) Frequent fluctuations within the control limits

109. What is the primary purpose of running quality control samples in a clinical laboratory?
 (A) To calibrate laboratory instruments
 (B) To monitor the accuracy and precision of test results
 (C) To validate new test methods
 (D) To determine reference ranges for patient samples
110. What is the significance of a low serum albumin level in liver function tests?
 (A) Hepatocellular damage (B) Impaired synthetic function
 (C) Cholestasis (D) Hemolysis
111. Non-steroidal anti-inflammatory drugs, such as aspirin act by inhibiting the activity of the enzyme:
 (A) Lipoxygenase (B) Cyclooxygenase
 (C) Phospholipase A2 (D) Lipoprotein lipase
112. Sheehans syndrome is
 (A) Irradiation damage of pituitary gland (B) Scarred pituitary adenoma
 (C) Postpartum pituitary necrosis (D) Surgical removal of pituitary gland
113. Which of the following is a key difference between Southern and Northern blotting?
 (A) Southern blotting detects DNA, while Northern blotting detects RNA
 (B) Southern blotting detects RNA, while Northern blotting detects DNA
 (C) Both techniques detect proteins
 (D) Both techniques detect DNA
114. What is the purpose of the extension step in PCR?
 (A) To synthesize DNA (B) To amplify DNA sequences
 (C) To separate the DNA strands (D) To bind the primers to the DNA template
115. Changes of colour in gangrene is due to
 (A) Deposition of melanin (B) Deposition of lipofuscin
 (C) Breakdown of hemoglobin (D) Deposition of calcium salts
116. Which test is used to evaluate the excretory function of the kidneys?
 (A) Serum creatinine (B) Blood urea nitrogen (BUN)
 (C) Urine creatinine (D) Serum electrolytes
117. Syphilis is confirmed by
 (A) VDRL test (B) RPR test
 (C) Dark ground illumination (D) TPHA
118. What is the purpose of using a fluorochrome stain in AFB staining?
 (A) To enhance the visibility of acid-fast bacilli
 (B) To differentiate between acid-fast and non-acid-fast bacteria
 (C) To detect the presence of fungi
 (D) To detect the presence of viruses
119. The optimum storage temperature for red cells is
 (A) -12 to -20 degree C (B) -20 to -30 degree C
 (C) 4 degrees to 6 degree C (D) 22 to 26 degree C
120. A mediator of acute inflammation that causes increased vascular permeability and pain is
 (A) Endotoxin (B) Complement
 (C) Histamine (D) Bradykinin

121. The isozyme CK-MB is specifically increased in the blood of patients who had
 (A) Skeletal muscle disease (B) Myocardial infarction
 (C) Infective hepatitis (D) Myxoedema
122. What is the significance of finding a positive AFB staining result in a patient with symptoms of tuberculosis?
 (A) It confirms the diagnosis of tuberculosis
 (B) It rules out the diagnosis of tuberculosis
 (C) It requires further testing to confirm the diagnosis
 (D) It is a normal finding
123. Inhalation of which of the following is associated with pleural mesothelioma
 (A) Cotton fibres (B) Silica dust
 (C) Asbestos (D) Beryllium
124. Which of the following is Not a test to detect bilirubin in urine sample:
 (A) Acetate test (B) Foam test
 (C) Gmelin test (D) Fouchet's test
125. Which of the following parasites can cause amoebic dysentery?
 (A) Entamoeba histolytica (B) Giardia lamblia
 (C) Ascaris lumbricoides (D) Trichuris trichiura
126. A 'suicide enzyme' is
 (A) Cyclooxygenase (B) Lipooxygenase
 (C) Phospholipase A1 (D) Phospholipase
127. Which of the following methods of transfusion eliminates the risk of transfusion of diseases.
 (A) Massive transfusion (B) Exchange transfusion
 (C) Autologous transfusion (D) Whole blood transfusion
128. According to WHO anemia is defined as
 (A) < 14 g/dl in men & < 13 g/dl in women (B) < 13 g/dl in men & < 12 g/dl in women
 (C) < 12 g/dl in men & < 11 g/dl in women (D) < 15 g/dl in men & < 14 g/dl in women
129. What does an elevated prothrombin time (PT) indicate in liver function tests?
 (A) Impaired protein synthesis (B) Cholestasis
 (C) Hepatocellular damage (D) Hemolysis
130. What is the name of the test used to detect the presence of Giardia lamblia in stool?
 (A) Direct fluorescent antibody (DFA) test (B) Enzyme-linked immunosorbent assay (ELISA) test
 (C) Rapid immunochromatographic test (D) Microscopy
131. Down syndrome is
 (A) Trisomy 21 (B) Trisomy 18
 (C) Trisomy 13 (D) Trisomy 23
132. What is a common solution to the problem of PCR contamination?
 (A) Use of sterile reagents and equipment (B) Use of positive displacement pipettes
 (C) Use of a laminar flow hood (D) All of the above

133. What is the significance of microalbuminuria in renal function tests?
(A) It indicates liver dysfunction (B) It is an early marker of kidney damage
(C) It suggests dehydration (D) It indicates a urinary tract infection
134. An example of scleroprotein is
(A) Zein (B) Keratin
(C) Glutenin (D) Ovoglobulin
135. Microcytic hypochromic is seen
(A) Sideroblastic anemia (B) Hypothyroidism
(C) Liver disease (D) Aplastic anemia
136. The major adult hemoglobin HbA has the structure
(A) Alpha 2 beta 2 (B) Alpha 2 gamma 2
(C) Alpha 2 delta 2 (D) Alpha 2 epsilon 2
137. What is the purpose of using a positive control in Western blotting?
(A) To detect the presence of proteins in a sample
(B) To verify the specificity of the primary antibody
(C) To enhance the sensitivity of the assay
(D) To detect the presence of antibodies in a sample
138. The hormone acting directly on intestinal mucosa and stimulating glucose absorption is
(A) Insulin (B) Glucagon
(C) Thyroxine (D) Vasopressin
139. Which of the following is susceptible to liquefactive necrosis following ischemic injury
(A) Pancreas (B) Liver
(C) Spleen (D) Brain
140. Which of the following is a common cause of random errors in laboratory testing?
(A) Inconsistent sample handling (B) Incorrect reagent preparation
(C) Instrument malfunction (D) Variability in technician technique
141. What is the advantage of using Northern blotting over other RNA detection methods?
(A) Higher sensitivity
(B) Higher specificity
(C) Ability to detect specific RNA molecules in a complex mixture
(D) All of above
142. Which of the following has large number of eosinophils in exudate
(A) Sarcoidosis (B) Bronchiectasis
(C) Bronchial asthma (D) Syphilis
143. Which of the following is a common application of Southern blotting?
(A) Diagnosis of genetic disorders (B) Detection of infectious diseases
(C) Study of gene expression and regulation (D) All of the above
144. Which of the following is not a part of Internal Quality Control in laboratory
(A) Levey Jennings Chart (B) Delta check
(C) Both (A) and (B) (D) Proficiency testing program

145. During storage concentration of 2,3-diphosphoglycerate (2,3 DPG) decreases in unit of
 (A) Platelets (B) Fresh frozen plasma
 (C) Red blood cells (D) Cryoprecipitate
146. Which of the following is a common safety precaution to take when handling bacterial cultures?
 (A) Use a biological safety cabinet (B) Use a chemical fume hood
 (C) Use a centrifuge (D) All of the above
147. In lepromatous leprosy
 (A) Epithelioid granuloma is characteristic (B) Bacilli are scanty
 (C) Spontaneous cure may occur (D) Lepromin test is negative
148. Negri bodies are seen in
 (A) Hepatitis B viral infection (B) Cytomegalovirus infection
 (C) Rabies (D) Whipples disease
149. What is the recommended action to take when a false-positive AFB staining result is suspected?
 (A) Repeat the staining procedure (B) Use a different staining protocol
 (C) Use a fluorescence microscope (D) Report the result as positive
150. Which of the following abnormality is most likely to be observed in known case of hemochromatosis
 (A) Ochronosis (B) Blue sclera
 (C) Bronze skin (D) Cherry red pupil
151. Which of the following is associated with panacinar emphysema
 (A) Recurrent viral infection (B) Exposure to organic dust
 (C) Alpha-1 antitrypsin deficiency (D) Goodpasture syndrome
152. What is the purpose of using a biohazard label on bacterial cultures?
 (A) To indicate the presence of bacteria (B) To indicate the type of bacteria present
 (C) To warn of potential biohazard (D) To promote the growth of bacteria
153. Which of the following species is typical of thalassemia.
 (A) Plethoric moon facies (B) Leonine facies
 (C) Chipmunk facies (D) Elfin facies
154. A tripeptide functioning as an important reducing agent in the tissues is
 (A) Bradykinin (B) Kallidin
 (C) Tyrocidin (D) Glutathione
155. The minimum hemoglobin concentration for blood donor is
 (A) 12 g/dl (B) 12.5 g/dl
 (C) 13 g/dl (D) 13.5 g/dl
156. What is a common solution to the problem of non-specific PCR amplification?
 (A) Optimization of PCR conditions (B) Use of hot start PCR
 (C) Use of nested PCR (D) All of the above
157. The most frequent form of primary glomerular disease in children is
 (A) Minimal change disease (B) Acute glomerulonephritis
 (C) Membranous glomerulonephritis (D) Membranoproliferative glomerulonephritis
158. Cell of origin of Ewings sarcoma is
 (A) Endothelial cell (B) Marrow cell
 (C) Osteoblast (D) Primitive neuroectodermal cell

159. Dutcher bodies are
 (A) Intracytoplasmic (B) Intranuclear
 (C) Intramitochondrial (D) Extracellular
160. Which of the following is a common cause of false-positive AFB staining results?
 (A) Presence of non-acid-fast bacteria (B) Insufficient decolorization
 (C) Over-staining (D) Use of contaminated reagents
161. The following hepatotropic virus is DNA virus
 (A) HAV (B) HBV
 (C) HCV (D) HDV
162. Following are features of hairy cell leukemia except
 (A) Splenomegaly (B) Pancytopenia
 (C) TRAP positivity (D) Leucocytosis
163. Which enzyme is most specific for liver damage?
 (A) Aspartate aminotransferase (AST) (B) Alanine aminotransferase (ALT)
 (C) Alkaline phosphatase (ALP) (D) Gamma-glutamyl transferase (GGT)
164. Which of the following is a common safety precaution to take when disposing of bacterial cultures?
 (A) Autoclaving (B) Incineration
 (C) Chemical disinfection (D) All of the above
165. Cobble stone appearance is seen in
 (A) Ulcerative colitis (B) Crohns disease
 (C) Ischemic colitis (D) Familial adenomatous polyposis
166. Irradiation of unit of red cells is done to prevent replication of donor:
 (A) Granulocytes (B) Lymphocytes
 (C) Red cells (D) Platelets
167. What is the purpose of documenting quality control results for bacterial cultures?
 (A) To detect the presence of bacteria
 (B) To identify the type of bacteria present
 (C) To ensure the accuracy and reliability of bacterial culture results
 (D) To promote the growth of bacteria
168. Which of the following pairs is Not correct
 (A) Purple cap- EDTA (B) Light blue cap- Sodium citrate
 (C) Red cap- Buffered sodium citrate (D) Green cap- Heparin
169. What is the significance of elevated gamma-glutamyl transferase (GGT) levels?
 (A) Hepatocellular damage (B) Cholestasis
 (C) Alcohol consumption (D) All of the above
170. Which of the following is not a feature of necrosis
 (A) Pyknosis (B) Karyorrhexis
 (C) Karyolysis (D) Cytoplasmic basophilia
171. Which of the following parasites can cause hookworm disease?
 (A) Ancylostoma duodenale (B) Entamoeba histolytica
 (C) Ascaris lumbricoides (D) Trichuris trichiura

172. What is the main purpose of an external quality assessment (EQA) program?
 (A) To calibrate laboratory instruments
 (B) To provide independent validation of laboratory test results
 (C) To train laboratory personnel
 (D) To establish internal control limits
173. Which of the following is not true about multiple myeloma
 (A) Lytic bone lesions (B) Rouleaux formation on peripheral smear
 (C) Increased Sr. Calcium (D) Reduced ESR
174. Which vaccination should be given to workers who deal with biological waste
 (A) HBV (B) Rabies
 (C) HPV (D) B.C.G.
175. What is a common cause of non-specific PCR amplification?
 (A) Incorrect primer design (B) Inadequate PCR conditions
 (C) Presence of inhibitors in the sample (D) All of the above
176. In which stage of erythroblast hemoglobin appears first
 (A) Proerythroblast (B) Early erythroblast
 (C) Intermediate erythroblast (D) Late erythroblast
177. Ehrlich's Aldehyde test is used for:
 (A) Bilirubin in urine (B) Urobilinogen in urine
 (C) Albumin in urine (D) Myoglobin in urine
178. Which of the following is a common cause of false-positive AFB staining results?
 (A) Presence of non-acid-fast bacteria (B) Insufficient decolorization
 (C) Over-staining (D) Use of contaminated reagents
179. Classical RS cell seen in
 (A) NLPHL (B) Lymphocyte predominant
 (C) Nodular sclerosis (D) Mixed cellularity
180. Ground glass appearance of hepatocytes seen in
 (A) Wilsons disease (B) Hemochromatosis
 (C) Primary sclerosing cholangitis (D) Hepatitis B Virus infection
181. Which of the following molecular techniques is used to detect the presence of viral pathogens in stool?
 (A) PCR (B) ELISA
 (C) Rapid immunochromatographic test (D) Microscopy
182. Platelets prepared by apheresis should contain at least
 (A) 1×10^{10} Platelets (B) 3×10^{10} Platelets
 (C) 3×10^{11} Platelets (D) 5×10^{11} Platelets
183. Which of the following chemical mediator is most important in the development of tubercular granuloma
 (A) Interferon gamma (B) Bradykinin
 (C) Complement c5a (D) Histamine

184. Which of the following is a common challenge encountered in Northern blotting?
- (A) Insufficient transfer of RNA to the membrane
 (B) Non-specific binding of the probe
 (C) Insufficient hybridization of the probe
 (D) All of the above
185. How can a laboratory minimize the impact of “carryover” in automated biochemistry analyzers?
- (A) Increase sample throughput
 (B) Perform thorough system flushing between samples
 (C) Use larger sample volumes
 (D) Decrease incubation times
186. In a standard PCR cycle, what is the typical temperature range for the denaturation step?
- (A) 50-60°C (B) 60-70°C
 (C) 70-80°C (D) 90-95°C
187. Which of the following ovarian tumour is more commonly associated with endometrial hyperplasia
- (A) Serous cystadenocarcinoma (B) Mucinous cystadenocarcinoma
 (C) Dysgerminoma (D) Granulosa cell tumour
188. The optimum storage temperature for platelets is
- (A) -20 degree to -24 degree C (B) -12 degree to -16 degree C
 (C) 4 degree to 8 degree C (D) 22 degree to 24 degree C
189. Which statistical test is most appropriate for determining if the means of quality control data from two different labs are significantly different?
- (A) Student’s t-test (B) Chi-squared test
 (C) ANOVA (D) Mann-Whitney U test
190. What is the purpose of using a quality control manual for bacterial cultures?
- (A) To detect the presence of bacteria
 (B) To identify the type of bacteria present
 (C) To ensure the accuracy and reliability of bacterial culture results
 (D) To promote the growth of bacteria
191. Which of the following is not associated with thrombosis
- (A) Sickle cell disease (B) Hemophilia A
 (C) Cancer (D) Prolonged bed rest
192. Krukenberg tumour is result of
- (A) Lymphatic spread (B) Hematogenous spread
 (C) Transcoelomic spread (D) Intraductal spread
193. Renal threshold for glucose is
- (A) 180 mg/dL (B) 120 mg/dL
 (C) 200 mg/dL (D) 300 mg/dL
194. Which of the following is a common occupational hazard associated with AFB staining?
- (A) Exposure to acid-fast bacilli (B) Exposure to chemicals
 (C) Exposure to radiation (D) All of the above

195. In quality assurance programme cryoprecipitate must contain a minimum of how many international units of factor VIII?
- (A) 60 (B) 70
(C) 80 (D) 90
196. Epithelioid cells are derived from
- (A) Neutrophils (B) Macrophage
(C) Eosinophil (D) Mast cell
197. In Southern blotting, what is the purpose of using a probe?
- (A) To denature the DNA
(B) To visualize the RNA
(C) To hybridize with the target DNA sequence
(D) To transfer proteins to the membrane
198. What is the purpose of performing a bacterial culture identification test?
- (A) To detect the presence of bacteria
(B) To identify the type of bacteria present
(C) To determine the antibiotic susceptibility of bacteria
(D) To promote the growth of bacteria
199. Parvo virus B19 is associated with
- (A) Pure Red Cell Aplasia (B) Essential Thrombocythemia
(C) Polycythemia vera (D) Myelodysplastic syndrome
200. Opsonisation is
- (A) Formation of free radicals (B) Degradation of bacteria by lysosomes
(C) Engulfment of antigen by leucocytes (D) Coating of antigen by antibodies